



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/717,412

11/18/2003

Michael H. McLernon

MWS-033RCE2

7251

74321

7590

07/08/2010

LAHIVE & COCKFIELD, LLP/THE MATHWORKS
FLOOR 30, SUITE 3000
One Post Office Square
Boston, MA 02109-2127

EXAMINER

SALOMON, PHENUEL S

ART UNIT

PAPER NUMBER

2179

MAIL DATE

DELIVERY MODE

07/08/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/717,412	Applicant(s) MCLERNON ET AL.	
	Examiner PHENUEL S. SALOMON	Art Unit 2179	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-17,20-26,29 and 40-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-17,20-26,29 and 40-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2179

DETAILED ACTION

1. This action is in response to the amendment filed on April 08, 2010. Claims 1, 3, 9, 10, 13, 16, 24, 25, 26, 40, 42 and 47 have been amended; claims 2, 5, 18, 19, 27, 28, 30-33 and 35 had been previously canceled, Claims 34 and 36-39 have been canceled; and claims 1, 3, 4, 6-17, 20-26, 29, and 40-48 are pending.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102(e) that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3-4, 6, 9-13, 16-17, 20, 22-26, 29, 40-44, and 46-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Lamanna et al. (US 20040031019 A1).

Claim 1: Lamanna discloses a computer-readable medium holding computer-executable instructions, the medium comprising:

instructions for selecting at least one characteristic common to a plurality of source blocks (*items 918-920*) in an executable block diagram model representing a dynamic system, a block of said executable block diagram model representing an elemental dynamic system (para. [0102]) [*items 918-920* consist of numeric text, therefore common characteristic in a math

Art Unit: 2179

environment], said selected at least one characteristic being at least one of a functional attribute, a compiled attribute, an execution data field, a block method or a block parameter (numeric text) (fig. 9, items 918-920);

instructions for receiving a designation of at least one destination block in said executable block diagram model (fig. 9, items 934, 936);

instructions for providing said designated at least one destination block with said selected at least one characteristic if said designated at least one destination block does not have said selected at least one characteristic (*the add icon's data output pin 946, which is associated with its Value property, is coupled to a first data input pin 947 of greater than icon 936 by a third wire construct 948, and the third text box icon's data output pin 949 is coupled to a second data input pin 950 of greater than icon 936 by a fourth wire construct 951*) (para. [0102]) [output of box 934 and 920 will be compared within box 936 since characteristics were non existent]; and

instructions for propagating a value of said selected at least one characteristic from at least one source block in said plurality of source blocks to said destination block (*first text box icon 918 has a data output pin 938, which is associated with that control's Text property, that may be visually connected to a first data input pin 939 of the add icon 934 by a first wire construct 940*) (para. [0102]).

Claim 3: Lamanna discloses the medium as in claim 1 above, comprising: instructions for creating a data structure for said selected at least one characteristic in said data structure having a plurality of substructures (fig. 11a).

Art Unit: 2179

Claim 4: Lamanna discloses the medium as in claim 1 above said selecting at least one characteristic involves the use of a category list, said at least one characteristic associated with at least one category of said category list (para. [0050]).

Claim 6: Lamanna discloses the medium as in claim 1 above, wherein said destination block is a subsystem representing a plurality of blocks said at least one characteristic is propagated to each of said plurality of blocks (fig. 9, items 934, 936, 928).

Claim 9: Lamanna discloses the medium as in claim 1 above propagating said selected at least one characteristic involves propagating less than all of the source block (para. [0043]).

Claim 10: Lamanna discloses the medium as in claim 1 above propagating involves propagating less than all characteristics of the source block, as specified by a user (para. [0112]).

Claim 11: Lamanna discloses the medium as in claim 1 above selecting involves selecting said at least one characteristic to be propagated from a Graphical User Interface (para. [0100]).

Claim 12: Lamanna discloses the medium as in claim 1 above said selecting involves selecting said at least one characteristics to be propagated by the use of a short key (para. [0150]).

Art Unit: 2179

Claim 13: Lamanna discloses the medium as in claim 1 above propagating involves propagating less than all characteristics of said source block, as automatically determined based on characteristics of said source block and characteristics of said destination block (para. [0118]).

Claim 16: Lamanna discloses the medium as in claim 1 above, comprising instructions for determining which blocks of said block diagram have characteristics corresponding to the selected at least one characteristic in said selecting (fig. 11, items 1120) [item 1120 is directly associated with 1136 while 1118 and 1119 are directed to 1134].

Claim 17: Lamanna discloses the medium as in claim 1 above, comprising instructions for determining which blocks of said block diagram have characteristics that could be propagated to said destination block (fig. 11, items 1120) [item 1120 is directly associated with 1136 while 1118 and 1119 are directed to 1134]

Claim 20: Lamanna discloses the medium as in claim 1 above, said selecting at least one characteristic is performed before said designating at least one destination block. (para. [0100]).

Claim 22: Lamanna discloses the medium as in claim 1 above, designation of at least one destination block is performed from a text-based list (fig. 11).

Claim 23: Lamanna discloses a medium as in claim 1 above said destination block does not have said characteristic prior to said propagating (*the add icon's data output pin 946, which is*

Art Unit: 2179

associated with its Value property, is coupled to a first data input pin 947 of greater than icon 936 by a third wire construct 948, and the third text box icon's data output pin 949 is coupled to a second data input pin 950 of greater than icon 936 by a fourth wire construct 951) (para. [0102]) [output of box 934 and 920 will be compared within box 936 since characteristics were non existent].

Claim 24: Lamanna discloses a system comprising:

a memory configured to hold an executable block diagram model of a dynamic system, said executable block diagram model having a plurality of blocks, a block of said executable block diagram model representing an elemental dynamic system (fig. 2 item 214 and para. [0102]); and

a processor configured to:

select at least one characteristic common to a plurality of blocks in said executable block diagram model (para. [0102]) [items 918-920 consist of numeric text, therefore common characteristic in a math environment], said selected at least one characteristic including at least one of a functional attribute, a compiled attribute, an execution data field, a block method or a block parameter (*numeric text*) (fig. 9, items 918-920),

receive a designation of a destination block in said plurality of blocks (fig. 9, items 934, 936), and

propagate said selected at least one characteristic to said destination block (*first text box icon 918 has a data output pin 938, which is associated with that control's Text property, that*

Art Unit: 2179

may be visually connected to a first data input pin 939 of the add icon 934 by a first wire construct 940) (para. [0102]).

Claim 25: Lamanna discloses a computer-readable medium holding computer-executable instructions, the medium comprising:

instructions for receiving a designation of a source block in an executable block diagram model representing a dynamic system, a block of said executable block diagram model representing an elemental dynamic system (fig. 9, para. [0102]);

instructions for receiving a designation of a plurality of destination blocks in said executable block diagram model (fig. 9, items 934, 936);

instructions for selecting at least one characteristic of said source block (para. [0102]) [items 918-920 consist of numeric text, therefore common characteristic in a math environment], said selected at least one characteristic including at least one of a functional attribute, a compiled attribute, an execution data field, a block method or a block parameter; (*numeric text*) (fig. 9, items 918-920)

instructions for propagating said selected at least one characteristic to each of said plurality of destination blocks of said executable block diagram model (*first text box icon 918 has a data output pin 938, which is associated with that control's Text property, that may be visually connected to a first data input pin 939 of the add icon 934 by a first wire construct 940) (para. [0102]).*

Claim 26 represents the apparatus of claim 25 and is rejected under the same rationale.

Claim 29 represents the apparatus of claim 11 and is rejected under the same rationale.

Claim 40. Lamanna discloses a computer-readable medium holding computer-executable instructions, the medium comprising:

instructions for selecting at least one characteristic of a source line associated with a first block and a second block of an executable block diagram model representing a dynamic system, a block of said executable block diagram model representing an elemental dynamic system, said source line representing at least one signal (para. [0102]) [items 918, 934, 940 consist of numeric text, therefore common characteristic in a math environment], said selected at least one characteristic including at least one of a functional attribute, a compiled attribute, an execution data field, a block method or a block parameter (numeric text) (fig. 9, items 918-920);

instructions for receiving a designation of at least one destination line associated with a third block and a fourth block of said executable block diagram model (fig. 9, items items 918, 940, 934, 948, 936, 957 and 928); and

instructions for propagating said selected at least one characteristic to said destination line associated with said third block and said fourth block of said executable block diagram model (fig. 9, para. [0102]).

Claim 41: Lamanna discloses the medium as in claim 40 above, said second block and said third block are the same block (fig. 9).

Art Unit: 2179

Claim 42. Lamanna discloses a computer-implemented method comprising:

selecting at least one characteristic common to a plurality of source blocks (*items 918-920*) in an executable block diagram model representing a dynamic system, a block of said executable block diagram model representing an elemental dynamic system (para. [0102]) [items 918-920 consist of numeric text, therefore common characteristic in a math environment], said selected at least one characteristic including at least one of a functional attribute, a compiled attribute, an execution data field, a block method or a block parameter (numeric text) (fig. 9, items 918-920);

receiving a designation of at least one destination block in said executable block diagram model (fig. 9, items 934, 936); and

propagating said selected at least one characteristic to said least one destination block (*first text box icon 918 has a data output pin 938, which is associated with that control's Text property, that may be visually connected to a first data input pin 939 of the add icon 934 by a first wire construct 940*) (para. [0102]).

Claim 43: Lamanna discloses the method as in claim 42 above, comprising determining said at least one destination block in a same block type as at least one source block in said plurality of source blocks (fig. 11a).

Claim 44: Lamanna discloses the method as in claim 42 above, said at least one destination block is designated based on said selected at least one characteristic, said selected at least one characteristic matching a characteristic of said at least one destination block (col.2, lines 19-27).

Art Unit: 2179

Claim 46: Lamanna discloses the the method as in claim 42 above, said at least one destination block is a subsystem representing a plurality of blocks and said selected at least one characteristic is propagated to each of said plurality of blocks in said subsystem (fig. 11b, items 1134, 1162, 1128).

Claim 47. Lamanna discloses a medium holding computer-executable instructions, the medium comprising:

instructions for selecting at least one characteristic of a first source block and a second source block (*items 918-920*) in an executable block diagram model representing a dynamic system, a block of said executable block diagram model representing an elemental dynamic system (para. [0102]) [*items 918-920 consist of numeric text, therefore common characteristic in a math environment*], said selected at least one characteristic including at least one of a functional attribute, a compiled attribute, an execution data field, a block method or a block parameter (numeric text) (fig. 9, items 918-920), said first source block having said selected at least one characteristic of a first value, said second source block having said selected at least one characteristic of a second value (para. [0137]);

instructions for receiving a designation of a first destination block and a second destination block in said executable block diagram model (fig. 9, items 934, 936); and

instructions for propagating said selected at least one characteristic to said first destination block and said second destination block, said first value propagated to said first

Art Unit: 2179

destination block and said second value propagated to said second destination block (fig. 9, para. [0137]).

Claim 48: Lamanna discloses the medium as in claim 47 above, said propagating step determines said first destination block and said second destination block by the use of respective contexts relative to said first source block and said second source block (para. [0102]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Art Unit: 2179

5. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lamanna et al. (US 2004/0031019 A1) in view of Budinsky et al. (US 6,407,753).

Claim 8: Lamanna discloses a medium as in claim 1 above, but do not explicitly disclose the step of undoing said propagating step by returning characteristics of said destination block to a condition existing prior to said propagating step. However, Budinsky discloses a multi-level undo/redo and direct rules manipulation (col. 3, lines 28-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include undoing propagating characteristics in Lamanna. One would have been motivated to do so in order to efficiently reinstate the affected block to its original state (col. 2, lines 56-60).

6. Claims 7 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamanna et al. (US 2004/0031019 A1) in view of Iriuchijima (US 6,070,006).

Claim 7: Lamanna discloses the medium as in claim 1 above, but do not explicitly disclose said destination block is a subsystem block representing a plurality of lower-level blocks and said propagating is restricted to propagating to said subsystem block without propagating to said plurality of lower-level blocks. However, Iriuchijima discloses non-inheritance attributes from parent to child class (col. 2, lines 36-42). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include propagation restriction in Lamanna. One would have been motivated to do so in order to prevent propagation of attributes to block of different nature (col. 2, lines 44-46).

Art Unit: 2179

Claim 21: Lamanna discloses the medium as in claim 1 above, but do not explicitly disclose said source block are a predetermined member of a plurality of said destination blocks. However, Iriuchijima discloses inheritance attributes from parent to child class (col. 1, lines 36-54).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include predetermined member in Lamanna. One would have been motivated to do so in order to quickly deploy attributes to blocks of the same nature (col. 2, lines 44-46).

7. Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamanna et al. (US 2004/0031019 A1) in view of Shudo et al (US 6,300,949 B1).

Claim 14: Lamanna discloses the medium as in claim 1 above, but does not explicitly disclose comprising instructions storing information relating to propagating to enable repeating said propagating. However, Shudo discloses stored attribute information for further propagating (col. 2, lines 1-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include storing information relating to propagating step in Lamanna. One would have been motivated to do so in order to facilitate a faster propagation of the same attribute on a larger scale (col. 2, lines 65-67).

Claim 15: Lamanna discloses the medium as in claim 14 above, but does not explicitly disclose said storing comprises storing information relating to multiple iterations of said propagating.

Art Unit: 2179

However, Shudo discloses stored attribute information for further propagating (col. 2, lines 18-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include multiple iterations of propagating step in Lamanna. One would have been motivated to do so in order to easily deploy the same attribute on a larger scale (col. 2, lines 65-67).

8. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lamanna et al. (US 2004/0031019 A1) in view of Santori (US 2003/0132964 A1).

Claim 45: Lamanna discloses the method as in claim 44 above, but do not explicitly disclose said at least one characteristic indicates that said at least one destination block is representative of a virtual subsystem. However, Santori discloses creating virtual instrumentation system (page 1, para [0009]). Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention to include virtual subsystem in Lamanna. One would have been motivated to do so in order to clearly identify characteristics propagation within block diagram environment (para. [0017]).

Response to Arguments

9. Applicant's arguments filed on 04/08/2010 have been fully considered but are moot in view of new ground of rejection(s).

Art Unit: 2179

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Jordan et al. (US 4,868,785).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phenuel S. Salomon whose telephone number is (571) 270-1699. The examiner can normally be reached on Mon-Fri 7:00 A.M. to 4:00 P.M. (Alternate Friday Off) EST.

Art Unit: 2179

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-3800.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Phenuel S. Salomon/

Examiner, Art Unit 2179

/Steven B Theriault/

Primary Examiner, Art Unit 2179